



PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q63961

Yasuo IWASA, et al.

Appln. No.: 09/841,486

Group Art Unit: 1771

Confirmation No.: 4521

Examiner: Hai VO

Filed: April 25, 2001

For: POROUS RESIN FILM AND INK JET RECORDING MEDIUM

REPLY BRIEF PURSUANT TO 37 C.F.R. § 1.193(b)

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

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Sir:

In accordance with the provisions of 37 C.F.R. § 1.193(b), Appellants respectfully submit this Reply Brief to address points raised by the Examiner's Answer of May 10, 2004. Entry of this Reply Brief is respectfully requested.

POINTS RAISED IN EXAMINER'S ANSWER

III. Status of the Claims

In paragraph (3) of the Examiner's Answer under "Status of the Claims", the Examiner indicates that claims 20 and 21 are objected to and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Appellants respectfully acknowledge the status of claims 20 and 21 as being objected to as indicated in the Examiner's Answer. The status of the claims is as follows:

Claims 7 and 12 are canceled.

Claims 1-6, 8-11 and 13-19 are rejected.

Claims 20 and 21 are objected to.

This is an appeal from the Examiner's rejection of claims 1-6, 8-11 and 13-19 and from the Examiner's objection to claim 20 and 21.

VI. Issues:

In view of the status of the claims including claims 20 and 21, which are objected to, Appellants submit the following as an additional issue:

3. Whether the objection to claims 20 and 21 as dependent upon a rejected base claim should be withdrawn.

VII. Grouping of Claims

Claims 1-6, 8 and 13-19 stand or fall together.

Claim 20 is separately patentable.

Claim 21 is separately patentable.

Specifically, claim 20 is directed to an ink jet recording medium comprising the porous resin film according to claim 1 and additionally a colorant fixing layer on one side of the porous

resin film. None of the prior art references discloses, teaches or suggests the recited ink jet recording medium of claim 20.

Claim 21 is directed to an ink jet recording medium comprising the laminate of claim 13 and a colorant layer provided on the porous resin film that is provided on one side of the base layer or on both the porous films provided on both sides of the base layer. None of the prior art references discloses, teaches or suggests the recited ink jet recording medium of claim 21.

VII. Arguments

A. Response to Examiner's Answer with Respect to the Rejection Under 35

U.S.C. § 102(b)

In paragraph (10) of the Examiner's Answer under "Grounds of Rejection", the Examiner maintains the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Suzuki et al. It is the Examiner's position that the claimed invention is inherently taught by Suzuki et al based on the reasoning that Suzuki et al teaches the same composition, wherein the amount of the components of the thermoplastic resin is within the claimed range, and the same kneading process, which inherently results in the same product having the same properties.

Appellants note that the present rejection is based on anticipation, which requires that all elements of the claim be taught by the reference, inherently or explicitly, and with specificity. *See Verdegaa Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987); *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989); and MPEP § 2131.03. In this

regard, Appellants respectfully submit that Suzuki et al does not teach all elements of the claimed invention as recited in claim 1 as explained previously, specifically, in the paragraph bridging pages 6 and 7 of the Appeal Brief. Suzuki et al does not disclose (1) a stretched porous resin film; (2) obtained from a composition consisting essentially of 30 to 100 % by weight of a thermoplastic resin and 0 to 70% by weight of at least one of an inorganic fine powder and an organic fine powder, wherein the thermoplastic resin comprises (a) 5 to 100 parts by weight of a hydrophilic thermoplastic resin, (b) per 100 parts by weight of a non-hydrophilic thermoplastic resin; and (3) liquid absorbing capacity of 0.54 ml/m^2 or more measured in accordance with the method specified in Japan TAPPI Standard No. 51-87. Further, Suzuki et al does not disclose the process elements of kneading the composition in an intermeshing twin extruder at a shear rate of 300 sec^{-1} or higher, which contributes structural and physical features to the claimed invention that distinguish the claimed invention over the product of Suzuki et al.

1. Differences in the Composition

a. The present invention excludes water as an ingredient in the composition from which the stretched film is made.

On page 8, in paragraph (11) under "Response to Arguments," the Examiner states:

It appears that water as a blowing agent in the Suzuki invention was evaporated during the drying, heating steps and the final product of Suzuki does not contain water. Thus "consisting essentially of" does not exclude Suzuki.

In regard to the Examiner's statement regarding the exclusion of the aqueous medium of Suzuki et al from the present invention, Appellants respectfully submit that the Examiner

misunderstands the claimed invention and the disclosure of Suzuki et al. First, in the claimed invention the recited stretched film is made from a starting composition that *consists essentially of* a thermoplastic resin and one of an inorganic or organic fine powder in the amounts recited in independent claim 1. Thus, the composition used to form the claimed invention should be compared to the composition used to form the final product of Suzuki et al. In this regard, Appellants have previously pointed out that an aqueous medium, i.e., water, is an essential component used in the formation of the resin foam of Suzuki et al and that water is excluded from the composition used to make the recited stretched porous resin film of the present invention.

Further, contrary to the Examiner's statements, Suzuki et al specifically discloses that the aqueous medium is not evaporated. Specifically, Suzuki et al teaches, "the resin compound is treated with the aqueous medium under such an elevated pressure that evaporation of the aqueous medium is substantially inhibited." (emphasis added). See Abstract, lines 14-17; col. 1, lines 48-51; col. 6, lines 16-19 and 58-61. Suzuki et al also teaches that the resin compound is treated with an aqueous medium to cause the aqueous medium to adhere to and be held by the resin compound. See col. 1, lines 39-42. It is further disclosed that the resin compound is composed of porous agglomerated resin particles (col. 1, lines 41-42) and when treated with the aqueous medium, the porous agglomerated particles should hold the aqueous medium stably (col. 3, lines 58-60). Thus, it is clear that the aqueous medium of Suzuki et al is not evaporated during heating or drying steps as asserted by the Examiner. This is also clear from the disclosure

of Suzuki et al at column 1, lines 54-64 where the disclosed process is distinguished from prior art methods based, in part, upon the removal of water by drying. In contrast, as discussed in Appellants' brief on page 9, in the examples of the present specification, the fine inorganic particles and hydrophilic resin are dried in an oven to control the content of moisture. Thus, the Examiner's reasoning with respect to whether the foam material product of Suzuki et al does not contain any water is based on an incorrect interpretation of the disclosure of Suzuki et al and is therefore inherently flawed.

The Examiner further states that the claims are not commensurate in scope with the argument that roughness is observed in the surface and inside of the porous film when the resin composition contains moisture in an amount of 400 ppm since the claims do not recite roughness properties.

Appellants respectfully submit that the statements regarding roughness were made to further substantiate the fact that the claimed invention does not include water or an aqueous medium in the composition from which the stretched film is made and that inclusion of an amount of water greater than 400 ppm would detrimentally affect the basic and novel characteristics of the claimed invention to further distinguish the claimed invention over the foamed material of Suzuki et al, in which water is employed as an essential ingredient. Thus, when viewed in its proper context, it is not necessary for the claims to recite a roughness property and the phrase "consisting essentially of" sufficiently distinguishes the claimed invention from Suzuki et al in that the composition of the present invention excludes water, or

the aqueous medium of Suzuki et al, which is an essential element of the composition used to make the disclosed foamed product.

b. Suzuki et al does not disclose a specific example of a composition consisting essentially of:

- (1) 30 to 100% by weight of a thermoplastic resin comprising**
 - (a) 5 to 100 parts by weight of a hydrophilic thermoplastic resin**
 - (b) per 100 parts by weight of a non-hydrophilic thermoplastic resin; and**
- (2) 0 to 70% by weight of at least one of an inorganic fine powder and an organic fine powder.**

With respect to the composition of the claimed invention, the Examiner takes the position that claim 1 does not require an inorganic or organic fine powder in view of the recitation of the range of 0 to 70% by weight of an inorganic fine powder and an organic fine powder recited in claim 1. See page 3 of the Examiner's Answer, part I under paragraph (10) "Grounds of Rejection". The Examiner further takes the position that Suzuki et teaches that the resin foam comprises about 50% by weight of a thermoplastic resin such as polyethylene or polypropylene resin in Examples 2 and 3 and that Suzuki discloses that the resin foam comprises fine hydrophilic solid powders of hydrophilic resins such as urea resins, melamine resins and phenolic resins. The Examiner also states that the proportion of the powders of hydrophilic resins are about 80 to 120 parts by weight of the thermoplastic resin, which is within the claimed range. See the paragraph bridging pages 8-9 of the Examiner's Answer.

Appellants respectfully submit that none of the Examples taught by Suzuki et al employ a "hydrophilic resin" as the fine powder such as urea resins, melamine resins and phenolic resins

as disclosed at column 2, lines 62-63. Therefore, at best, the disclosure at column 2, lines 62-63 amounts to a suggestion to substitute the “hydrophilic powders” for the cereal powders and inorganic materials actually employed in the examples and does not amount to anticipation of the recited composition.

Even if it were to be argued that the disclosure of the “hydrophilic powders” is sufficient to rise to the level of anticipation of the components of the recited composition, there is no teaching or disclosure that indicates that if powders of hydrophilic resins such as urea resins, melamine resins and phenolic resins as disclosed at column 2, lines 62-63, were substituted for the precipitated calcium carbonate, wood flour, talc, starch, and pulp, etc., (i.e., the fine powders disclosed in the examples), that they would *necessarily* be employed within a range of 80 to 120 parts by weight, much less in a range of 5 to 100 parts by weight as in the present invention. In this regard, Suzuki et al specifically states:

[t]he proportion of the fine hydrophilic solid powder based on the thermoplastic resin at the time of charging them into the mixer can be varied widely according to the types of the resin and the fine solid powder, the water absorption and the water vapor adsorption ratio required of the resulting porous agglomerated particles, etc. Generally, the proportion of the fine solid powder is 30 to 250 parts by weight, preferably 60 to 150 parts by weight, preferably 60 to 150 parts by weight, more preferably 80 to 120 parts by weight per 100 parts by weight of the thermoplastic resin.

Thus, Suzuki et al cannot be said to disclose with “sufficient specificity” a thermoplastic resin comprising a hydrophilic resin and a non-hydrophilic resin within the claimed range of 5 to 100 parts per weight of the hydrophilic resin per 100 parts by weight of a non-hydrophilic resin.

Appellants reiterate that to establish an “anticipation” rejection under §102, the reference must teach every element of Applicants’ claims. Rejections under 35 U.S.C. §102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus, the reference must clearly and unequivocally disclose the claimed composition or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. Such picking and choosing has no place in the making of a §102, anticipation rejection. In re Arkley, Eardley, and Long, 172 USPQ 524, 526 (CCPA 1972).

2. Differences in the Process

On page 10 of the Examiner’s Answer, the Examiner admits that the process disclosed by Suzuki et al is not the same as the process of the claimed invention and that the shear rate as a product-by-process element of the claims may be critical to the claimed invention. However, the Examiner takes the position that the process element of the shear rate is “clearly not critical to providing the technical advantage in accordance with Suzuki’s procedure since the physical attributes of pore size and surface porosity as well as dispersion are apparently achieved by Suzuki.” The Examiner further states, “since the composition and physical form of Suzuki is the same as in the presently claimed invention, the recited liquid absorption property is an inherent property.”

Appellants respectfully submit that the Examiner’s position does not make sense and is not clear. Appellants note that in regard to the product-by-process claims in the present

application, it is the Examiner's burden to provide a rationale or evidence tending to show that the alleged inherent property or characteristic *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Based on the Examiner's own statements that the claimed process is different from that of Suzuki et al and that the process element of the shear rate is critical to the claimed invention, Appellants submit that the Examiner has not met her burden of providing a rationale or evidence that the recited property of liquid absorptivity is inherent since it has been shown (and accepted by the Examiner) that Suzuki et al does not disclose, teach or suggest the screw shear rate recited in independent claim 1 and that this element is critical to obtaining the desired liquid absorptivity of the claimed invention as recited in independent claim 1. See Appellants' Brief, page 18, lines 14-19. Thus, the Examiner's position with respect to the shear rate recited in Appellants' claims and the criticality of "providing a technical advantage in accordance with Suzuki's procedure" is not properly based on the law.

Appellants further submit that the Examiner's statement that there is no evidence of record to show the criticality of such shear rate to prevent the resin foam of Suzuki from attaining the liquid absorbing capability of the claimed invention is not the proper standard for determining whether an alleged inherent characteristic *necessarily* flows from the applied prior art. The fact that a certain result or characteristic may occur or be present is not sufficient to establish inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993).

As to the Examiner's statements that Suzuki et al is not limited to the three types of hydrophilic powders disclosed in the reference on page 10 of the Examiner's Answer, Appellant's respectfully submit that the rejection is an anticipation rejection under 35 U.S.C. § 102(b) and in this regard, Suzuki et al is limited to the disclosed hydrophilic powders. Further contrary to the Examiner's statement that the disclosed hydrophilic resins "do melt" at the melting temperature of the kneaded thermoplastic resin, Appellants direct the Board's attention to the disclosure of Suzuki et al, which states that the fine hydrophilic solid powder "does not substantially melt at the melting temperature of the resin particles" (emphasis added). See Abstract and column 2, lines 51-53 of Suzuki et al. Therefore, the disclosed hydrophilic resins are not the same as those of the present application and do not have the same or similar properties. Thus, it cannot be said that Suzuki et al teaches the same or a similar composition such that the recited properties of the claimed stretched porous film, such as liquid absorptivity, *necessarily* flow from the applied prior art. Therefore, Suzuki does not anticipate the claimed invention, nor does it render the claimed invention obvious since there is no suggestion or motivation to modify or combine Suzuki et al to use other hydrophilic resins and achieve the claimed invention.

Similarly, with respect to the Examiner's statements regarding the water contact angle of the present invention, Appellants submit that it has been established that Suzuki et al does not disclose, teach or suggest the same composition or process for making the claimed stretched

porous film and therefore it cannot be said that Suzuki inherently discloses the water contact angle of the present invention.

With respect to other points raised by the Examiner regarding the disclosure of Suzuki et al, Appellants refer to the Appeal Brief and the arguments of record, which are incorporated herein.

B. Response to Examiner's Answer with respect to the Rejections Under 35 U.S.C. § 103

With respect to the rejections under 35 U.S.C. § 103, Appellants respectfully refer to the arguments in Appellants' Brief and the arguments of record, which are incorporated herein by reference.

C. Response to Objections to Claims 20 and 21

Appellants respectfully traverse the objection to claims 20 and 21 and submit that claims 20 and 21 depend from claims 1 and 13, respectively, and are distinguished over the art of record for at least the same reasons as set forth during prosecution and in the Appeal Brief filed on February 23, 2004, which are incorporated herein by reference, and as set forth herein above in response to the Examiner's Answer.

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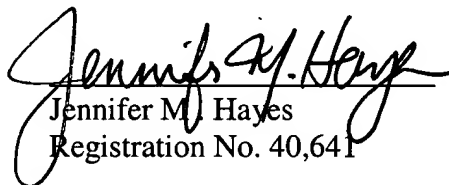
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CONCLUSION

For the above reasons as well as the reasons set forth in Appellant's Brief on Appeal, Appellants respectfully request that the Board reverse the Examiner's rejections of all claims on appeal. An early and favorable decision on the merits of this appeal is respectfully requested.

Respectfully submitted,

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